

100

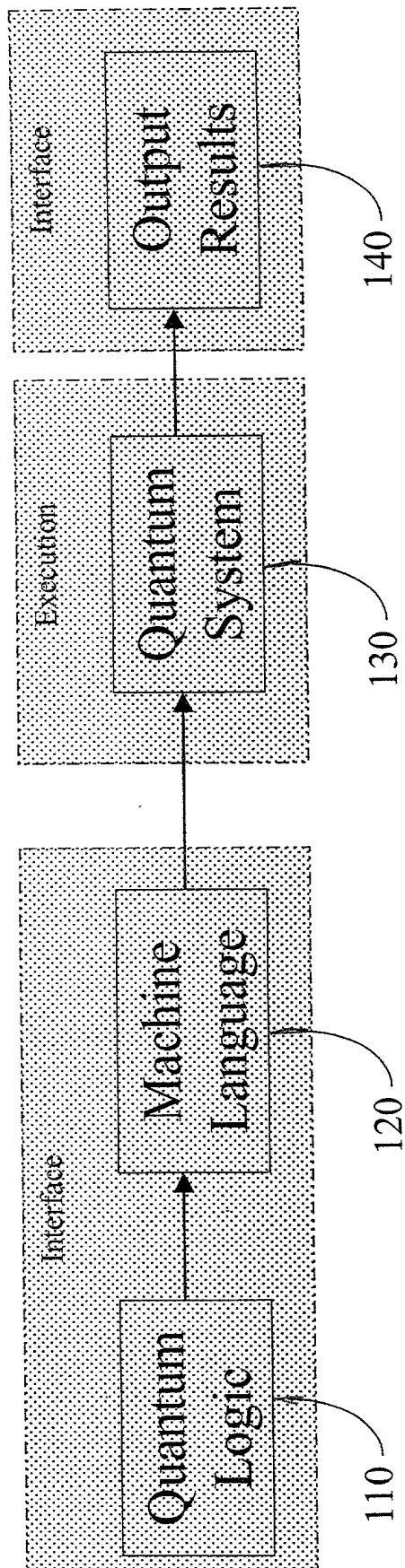


Fig. 1

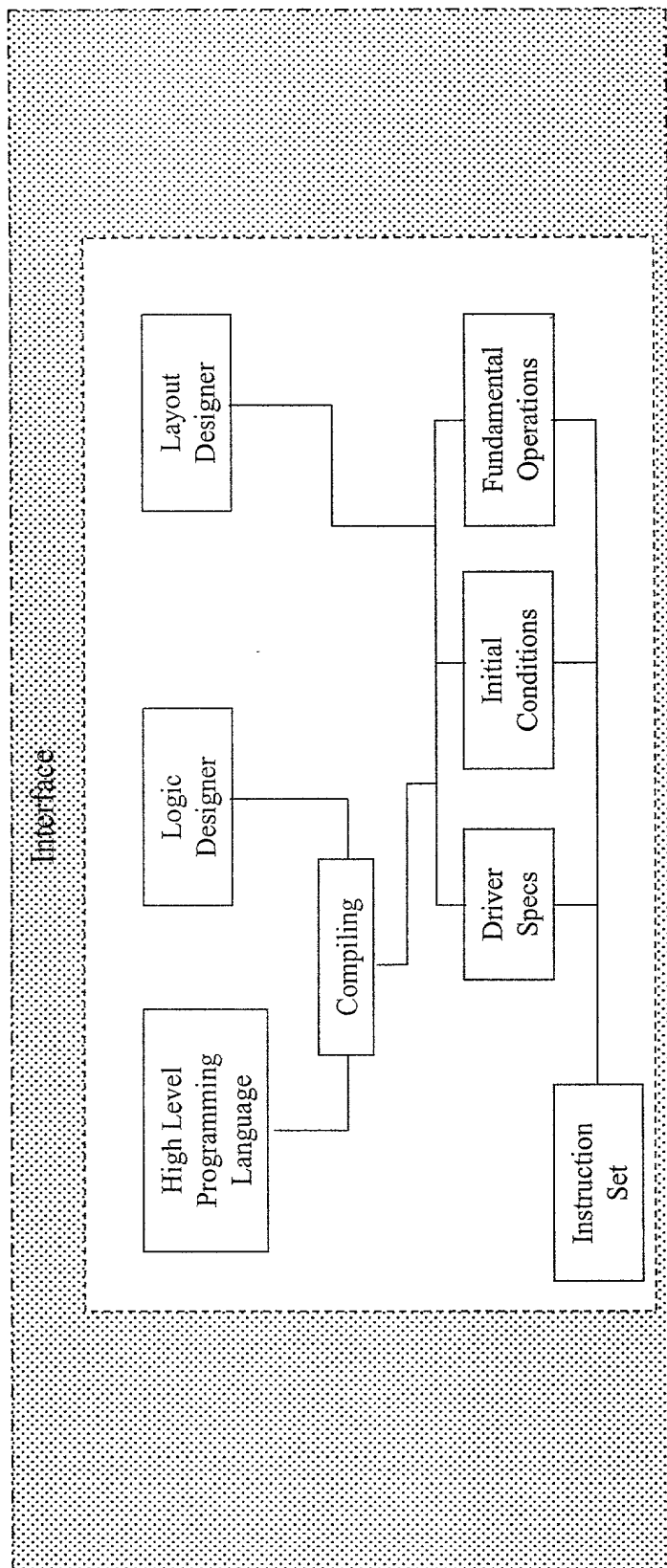


Fig. 2A

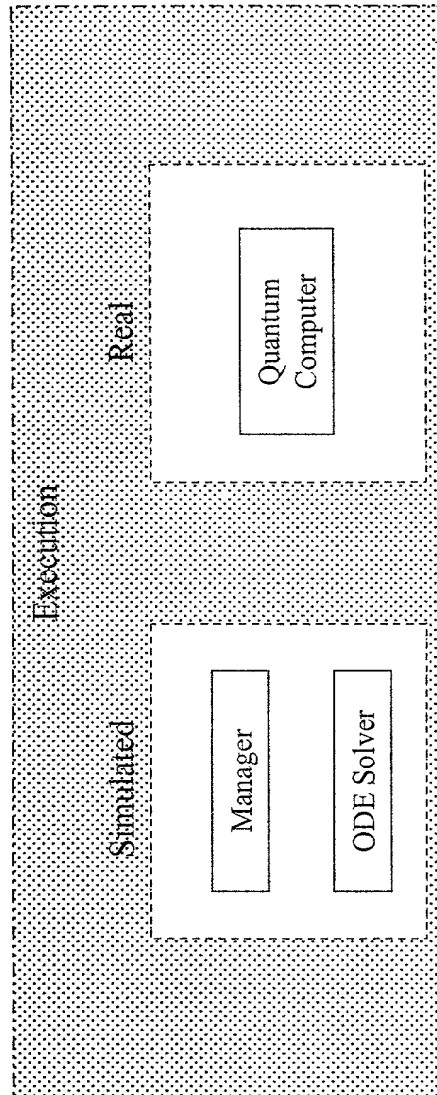


Fig. 2B

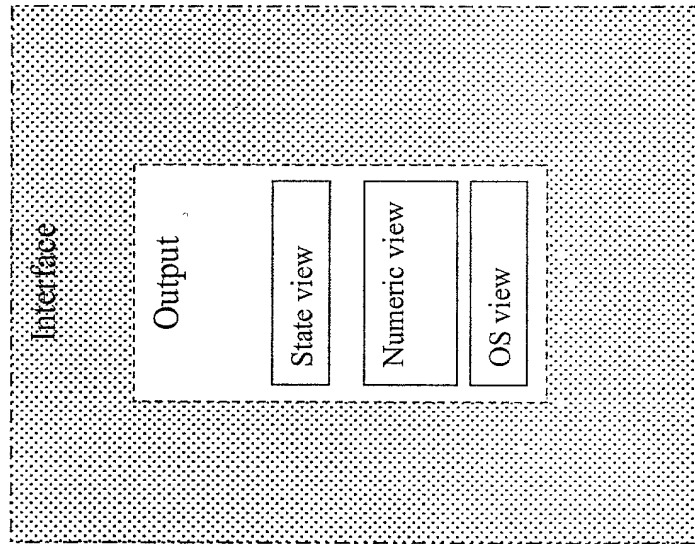


Fig. 2C

$$\begin{array}{c}
 300 \quad \begin{array}{c} |\psi\rangle \rightarrow \\ \begin{bmatrix} 00 \\ 01 \\ 10 \\ 11 \end{bmatrix} \end{array} \quad ; \quad \hat{\sigma}_x^1 = \begin{bmatrix} 0 & 1 & 0 & 0 \\ 1 & 0 & 0 & 0 \\ 0 & 0 & 0 & 1 \\ 0 & 0 & 1 & 0 \end{bmatrix} \quad ; \quad \hat{\sigma}_x^2 = \begin{bmatrix} 0 & 0 & 1 & 0 \\ 0 & 0 & 0 & 1 \\ 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & 0 \end{bmatrix} \\
 310 \quad \quad \quad 311
 \end{array}$$

$$\begin{array}{c}
 320 \quad \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & -1 & 0 & 0 \\ 0 & 0 & 1 & 0 \\ 0 & 0 & 0 & -1 \end{bmatrix} \quad ; \quad \hat{\sigma}_z^1 = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & 0 \\ 0 & 0 & -1 & 0 \\ 0 & 0 & 0 & -1 \end{bmatrix} \quad ; \quad \hat{\sigma}_z^1 \hat{\sigma}_z^2 = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & -1 & 0 & 0 \\ 0 & 0 & -1 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix} \\
 321 \quad \quad \quad 340
 \end{array}$$

$$\begin{array}{c}
 330 \quad \begin{bmatrix} 0 & -i & 0 & 0 \\ i & 0 & 0 & 0 \\ 0 & 0 & 0 & -i \\ 0 & 0 & i & 0 \end{bmatrix} \quad ; \quad \hat{\sigma}_y^1 = \begin{bmatrix} 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & -i \\ i & 0 & 0 & 0 \\ 0 & i & 0 & 0 \end{bmatrix} \quad ; \quad \hat{\sigma}_y^2 = \begin{bmatrix} 0 & 0 & -i & 0 \\ 0 & 0 & 0 & -i \\ i & 0 & 0 & 0 \\ 0 & i & 0 & 0 \end{bmatrix} \\
 331
 \end{array}$$

Fig. 3

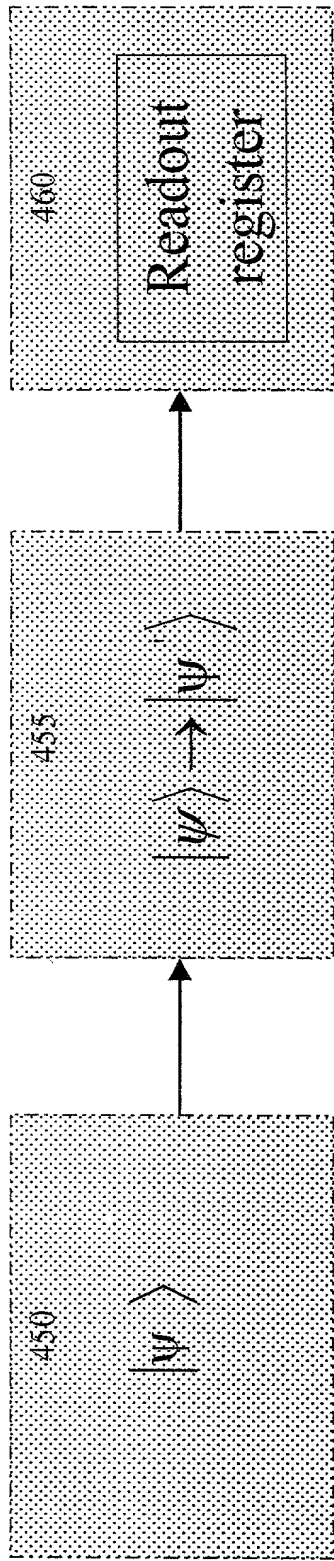


Fig. 4